

OCTOBER 2019



**WIM #27  
MN 60,  
MP 64.8  
ST. JAMES, MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #27 is located on MN 60 near St. James in Watonwan county.

## System Operation

WIM #27 was operational for the entire month of October 2019. Volume was computed using all monthly data.

## System Calibration

WIM #27 was most recently calibrated on 2015-06-17. Table 1 summarizes the front axle weights of class 9s by lane <sup>1</sup>. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation <sup>2</sup>. Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

## Summary of Volume Statistics

Total Monthly Volume: 166363 | Passenger Vehicles: 132044 | Heavy Commercial Vehicles: 34319

Monthly Average Daily Traffic (MADT): 6814 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1107

See Table 2 for vehicle class breakdown

## Passenger Vehicles (PVs) and Heavy Commercial Vehicles (HCVs)

**Volume trends.** EB vehicles typically reached highest volume levels on Sundays, with lowest volumes reported on Wednesdays. WB vehicles typically reached highest volume levels on Sundays, with lowest volumes reported on Wednesdays (see Figure 3 and 4).

### Passenger Vehicles (PVs)

**Volume trends.** On an average 24-hour day (see Figure 5), EB PVs generally reached peak volume levels between 01 PM and 03 PM. Similarly, WB PVs peaked in volume between 01 PM and 04 PM

### Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling EB typically reached peak volume levels between 01 PM and 03 PM, while volume going WB peaked between 01 PM and 04 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

### Overweight HCVs

**Volume trends.** Of a total of 34319 HCVs, 6299 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 3.9% of total monthly volume, and 18.8% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Thursdays, with lowest volumes reported on Saturdays. WB overweight vehicles tended to reach highest volumes on Mondays, with lowest volumes reported on Saturdays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 10 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 79.4% of all overweight vehicles traveling EB this month (see Figure 7 & 8). Figure 9 shows the number of vehicles exceeding 88,000 pounds that crossed the WIM over the last 12 months. The highest number of 88,000+ vehicles within the last 12 months occurred in November.

WIMs are currently used as a screening tool for weight enforcement, and it is estimated that the WIM scales can measure gross vehicle weights (GVW) within 90-95% of static weight scale measurements. Due to the possibility of measurement error, vehicles exceeding 10% of their legal weight limits (or 1.1 times their legal weight limits) are considered overweight in this report <sup>4</sup>.

Using normal load limits ,1071 EB vehicles exceeded 88,000 pounds (766 vehicles were Class 9's; 112 vehicles were Class 13's). Of vehicles traveling WB,

109 EB vehicles exceeded 88,000 pounds (47 vehicles were Class 13's; 32 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from October 2019.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in October 2019. Data suggests that there were greater numbers of fully\_loaded Class 9's than empty Class 9's traveling EB, while there were more fully\_loaded Class 9's than empty traveling WB. Data also suggests that there were more fully\_loaded Class 10's than empty traveling in the EB direction. In the WB direction, there were more fully\_loaded class 10 vehicles.

**Freight Totals.** A total of 366180 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (57.5%) than WB (42.5%). See Table 4 and Figure 11 for more freight information.

**#####Infrastructure Considerations Bridge.** Bridge No. 93716, an arch pipe, is approximately 3.0 miles west of WIM #27 and Bridge No. 83030 is approximately 8.1 miles east of WIM #27. WIM #27 recorded a total of 166363 vehicles with a combined GVW of 2362447 kips (1 kip = 1,000 pounds = 0.5 tons) in October 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 38451 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 65.9% of all ESALs were recorded EB while 34.1% was observed WB. In particular, 75% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 58% of total GVW observed this month). See Table 6 and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

#####WIM monthly reports can be found at:

<http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html> MnDOT's vehicle

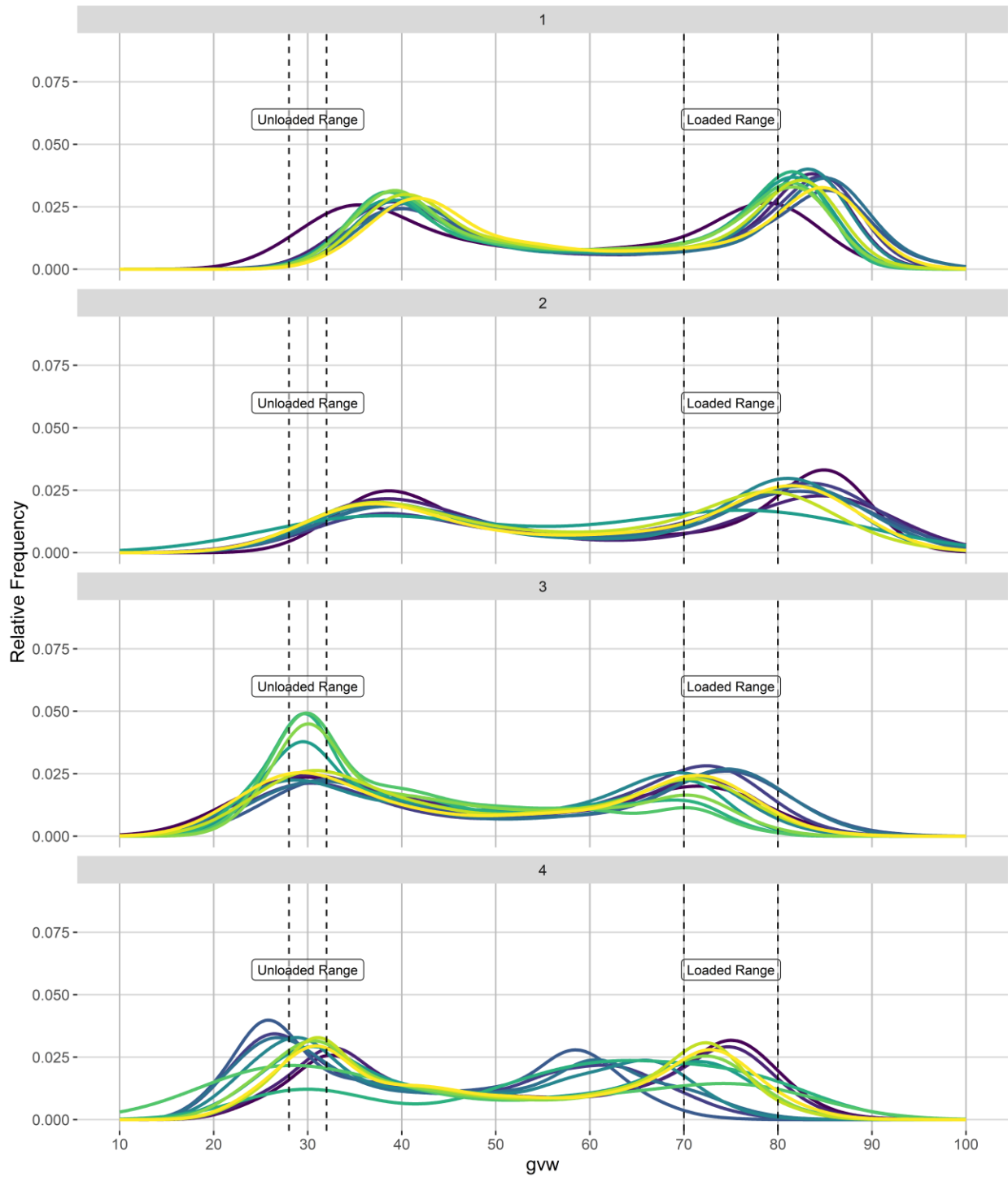


classification scheme and vehicle class groupings for traffic forecasting can be found at:  
<http://www.dot.state.mn.us/traffic/data/data-products.html#weight>

- <sup>1</sup> Front axle weights of Class 9s are monitored on a monthly basis to assure performance between calibrations. The current goal of the WIM scale calibration is to have each individual axle weight stay within a range of ±9% of baseline calibration values
- <sup>2</sup> Previous WIM research indicates that unloaded Class 9s typically weigh 28-32 kips, while loaded Class 9s generally fall in the 70-80 kip range. More recent data from several WIM sites suggests that the unloaded Class 9 range may have moved a little higher over time (due to increased presence of sleeper cabs, etc.), although these ranges are also thought to be site-specific.
- <sup>3</sup> An HCV is considered overweight during normal load limits in this report if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 80,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 20,000 pounds; tandem axles spaced 8' or less = 34,000 pounds; tridem axles spaced 9' or less = 43,000 pounds; quad axles spaced 13' or less = 51,000 pounds). Monthly reports use this standard regardless of the time of year however, the Winter Load Increase (WLI) allows a 10% across the board increase in axle and gross vehicle weights without a permit on US, state routes, and county roads. An HCV is considered overweight during Winter Load Increase(WLI) if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 88,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 22,000 pounds; tandem axles spaced 8' or less = 37,400 pounds; tridem axles spaced 9' or less = 47,300 pounds; quad axles spaced 13' or less = 56,100 pounds). An overweight HCV is only included once in the overweight volume calculations regardless of how many of the aforementioned conditions are violated. For information on MN weight limit dates and statutes:  
[http://www.mrr.dot.state.mn.us/research/seasonal\\_load\\_limits/sllindex.asp](http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp)
- <sup>4</sup> For example, Class 9s and 10s can legally have gross vehicle weights up to 80,000 lbs (with the exception of permitted loads) during normal load limits. To account for measurement error on the WIM scales, those exceeding 10% of the legal GVW maximum (or 1.1 times the legal GVW) should be screened (e.g., 80,000 lbs + 8,000 lbs = 88,000 lbs). Similarly during WLI vehicles weighing 96,800 lbs should be screened.

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Figure 1 - Monthly Class 9 GVW Histogram



Time

November 2018	February 2019	May 2019	August 2019
December 2018	March 2019	June 2019	September 2019
January 2019	April 2019	July 2019	October 2019

Months that have not passed QC parameters are not displayed

Last Calibration (+/- 95% CI)



Months that have not passed QC parameters are not displayed

Figure 2 - Average Vehicle Volume  
vs. Day of the Week

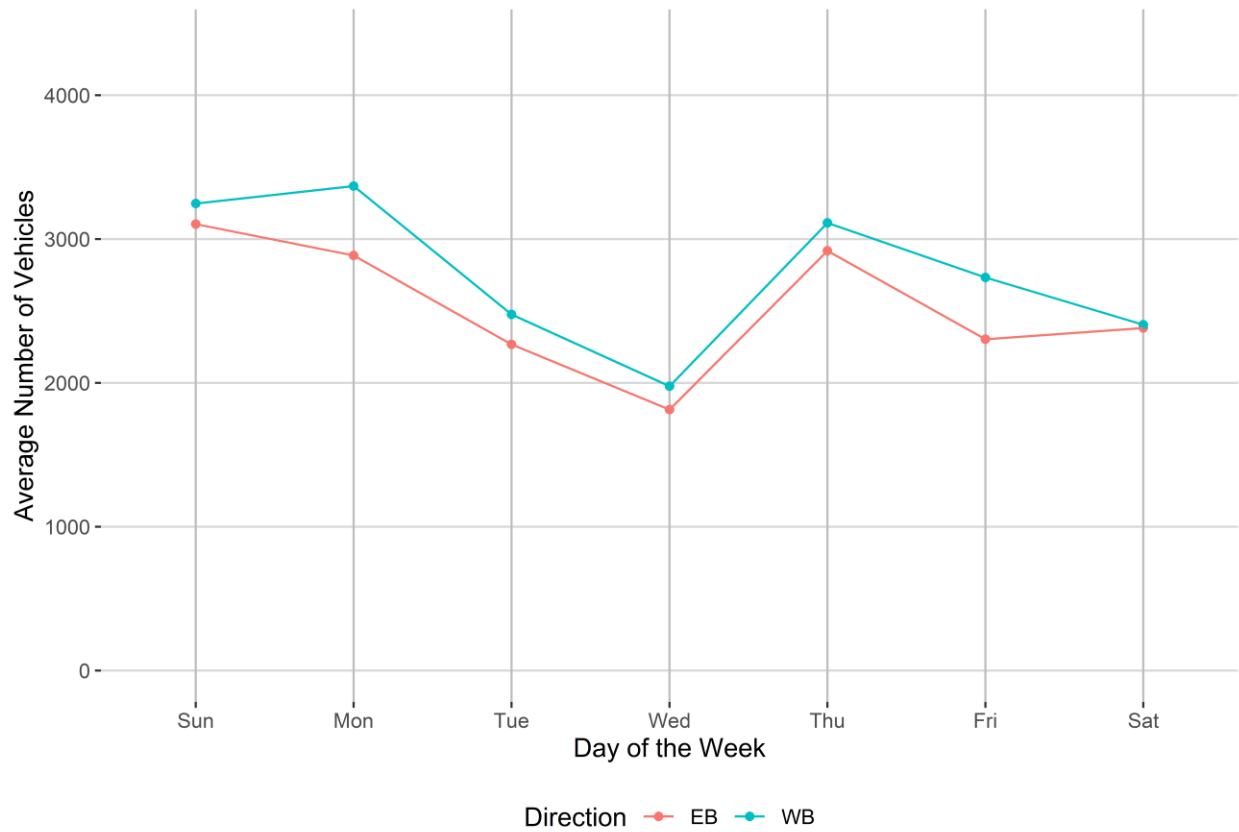


Figure 3 - Average Overweight Vehicle Volume  
vs. Day of the Week

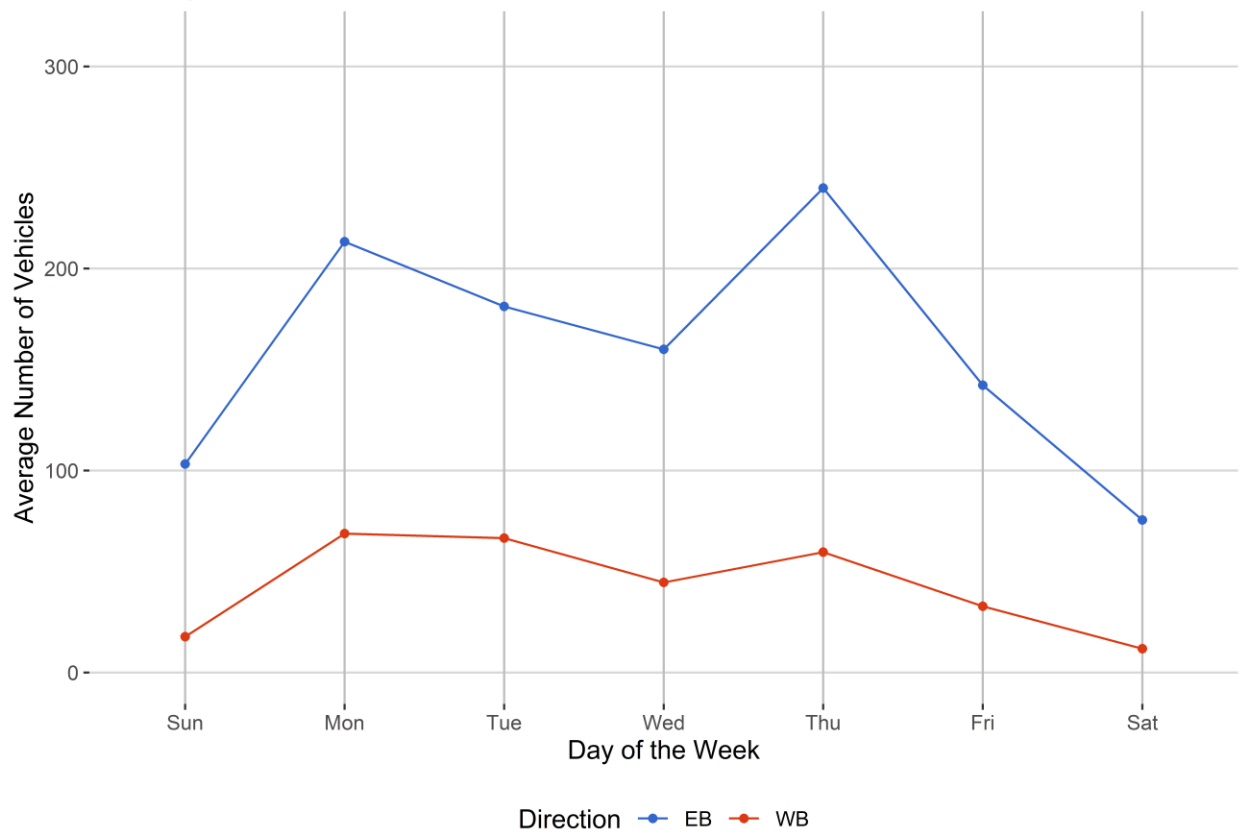


Figure 4 - Passenger Vehicles  
vs. Hour of the Day

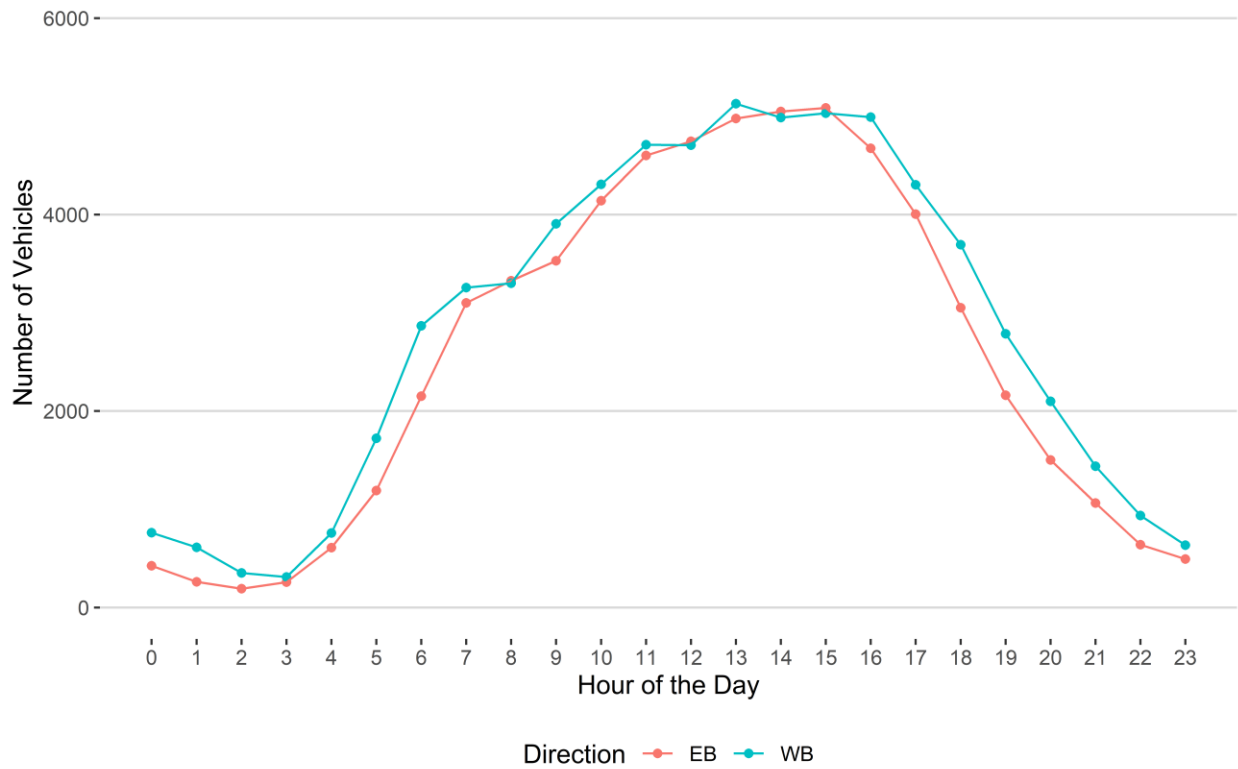


Figure 5 - Heavy Commercial Vehicles  
vs. Hour of the Day

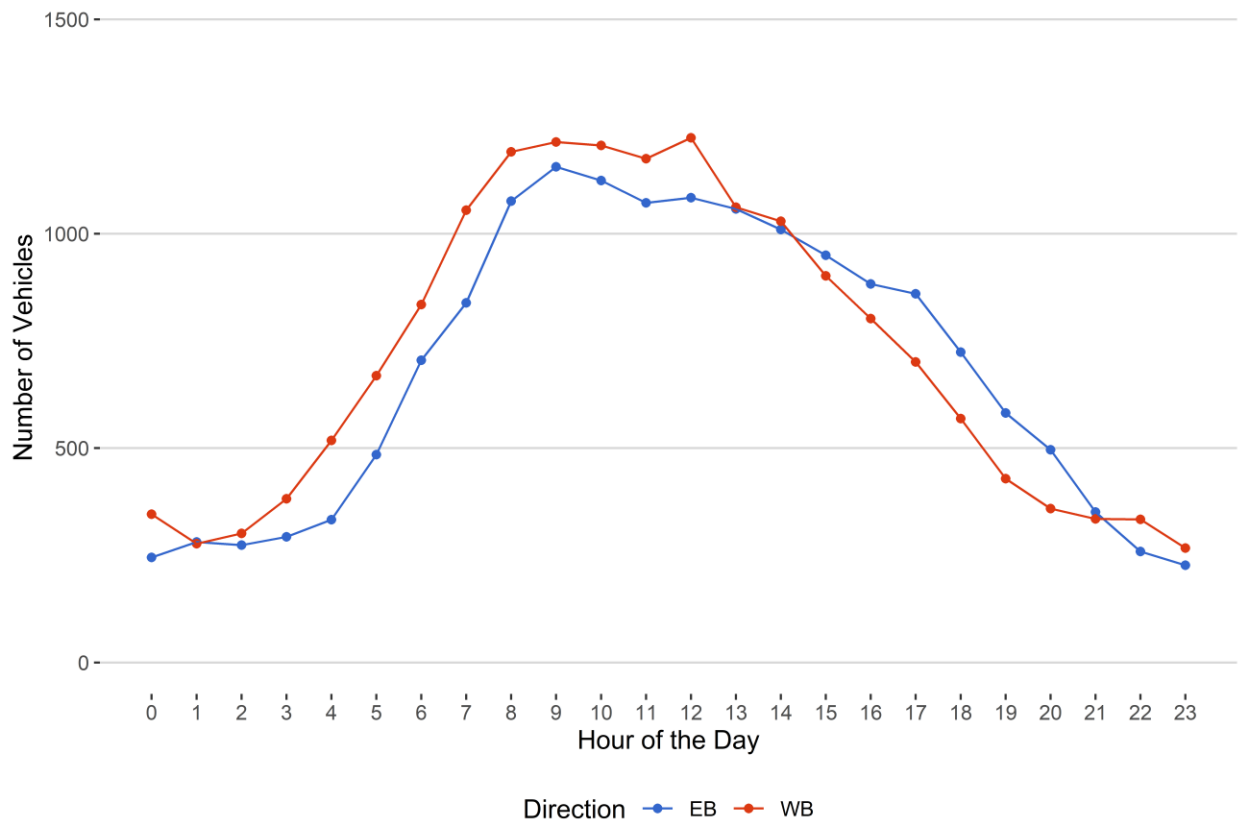




Figure 6 - Overweight Vehicles by Class  
vs. Hour of the Day

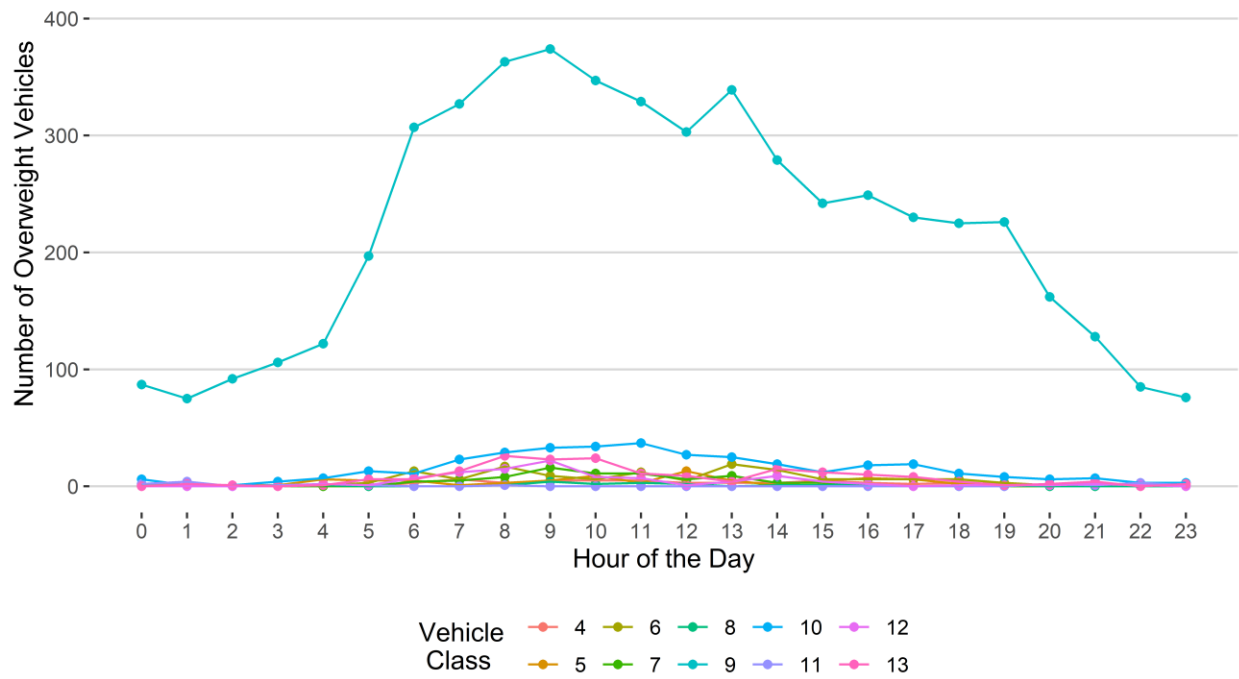


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

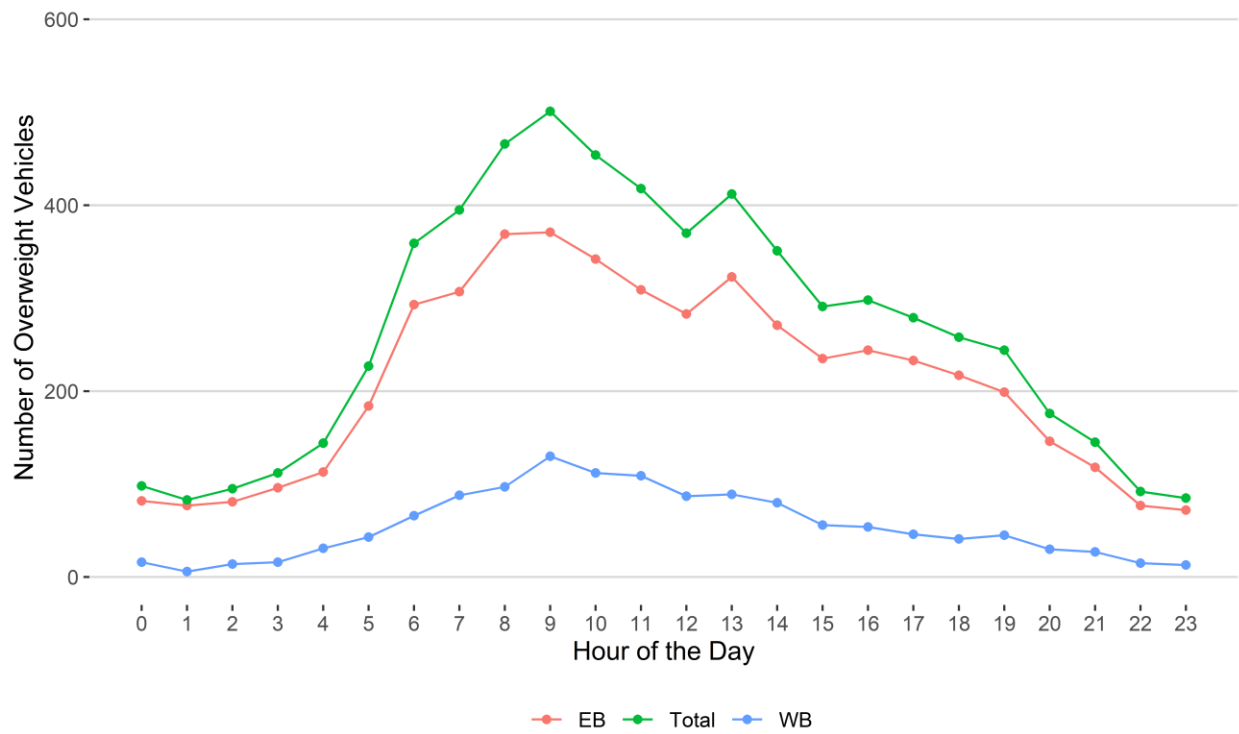
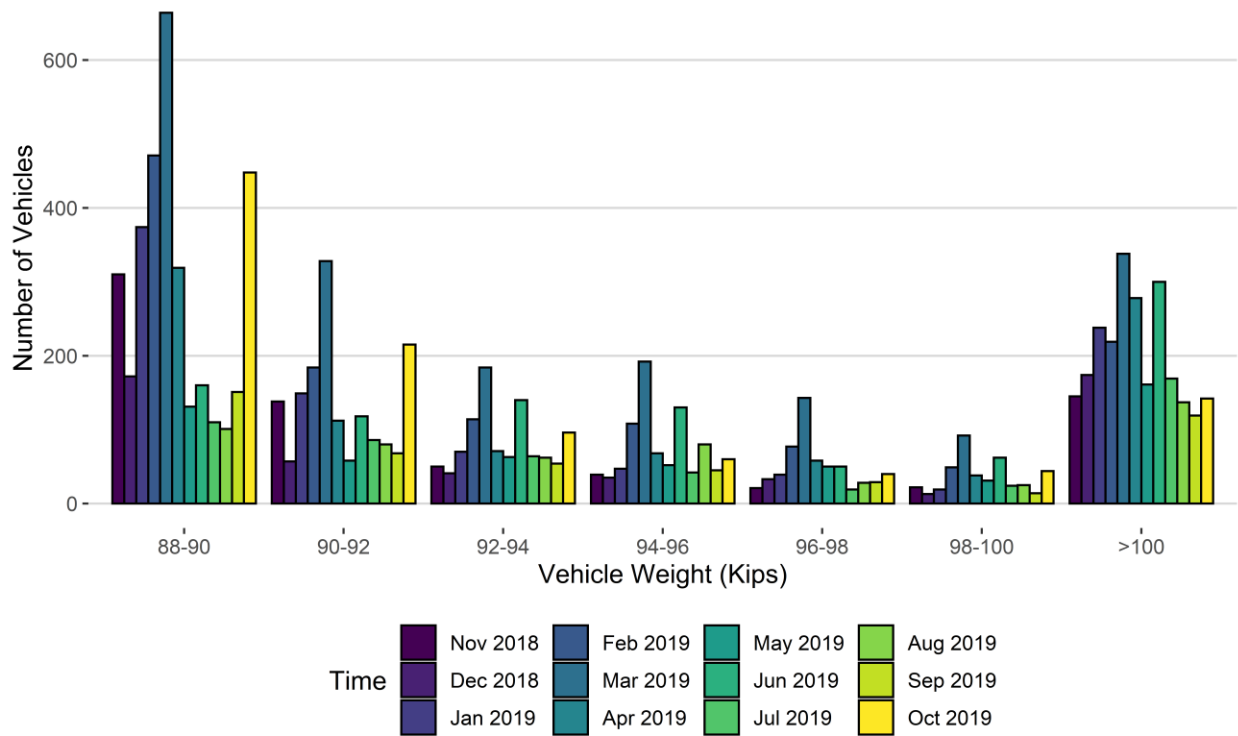
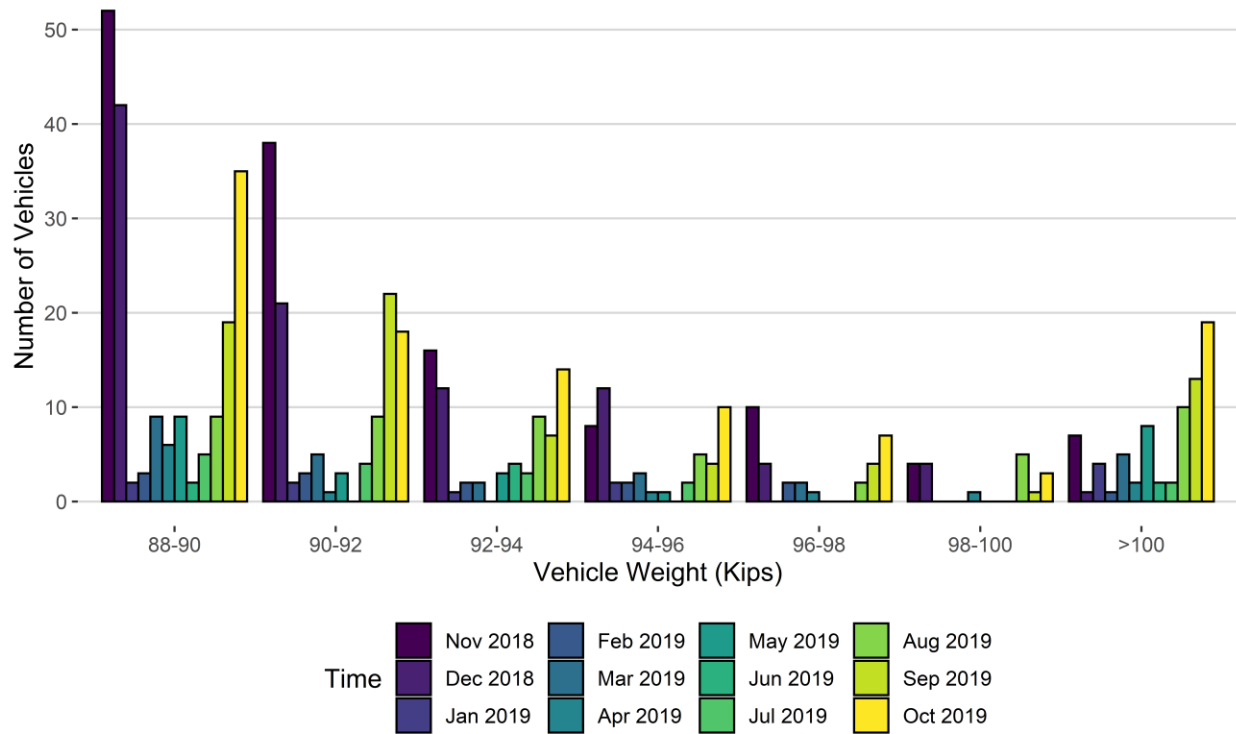


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019
88-90	310	172	374	471	664	319	131	160	110	101	151	448
90-92	138	57	149	184	328	112	58	118	86	80	68	215
92-94	50	41	70	114	184	71	63	140	64	62	54	96
94-96	39	35	47	108	192	68	52	130	42	80	45	60
96-98	21	33	39	77	143	58	50	50	19	28	29	40
98-100	22	13	19	49	92	38	31	62	24	25	14	44
>100	145	174	238	219	338	278	161	300	169	137	119	142
Total	725	525	936	1222	1941	944	546	960	514	513	480	1045

Figure 8 - Histogram of WB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019
88-90	52	42	2	3	9	6	9	2	5	9	19	35
90-92	38	21	2	3	5	1	3	0	4	9	22	18
92-94	16	12	1	2	2	0	3	4	3	9	7	14
94-96	8	12	2	2	3	1	1	0	2	5	4	10
96-98	10	4	0	2	2	1	0	0	0	2	4	7
98-100	4	4	0	0	0	1	0	0	0	5	1	3
>100	7	1	4	1	5	2	8	2	2	10	13	19
Total	135	96	11	13	26	12	24	8	16	49	70	106

Figure 8 - Class 9's and 10's by Direction  
vs Gross Vehicle Weight

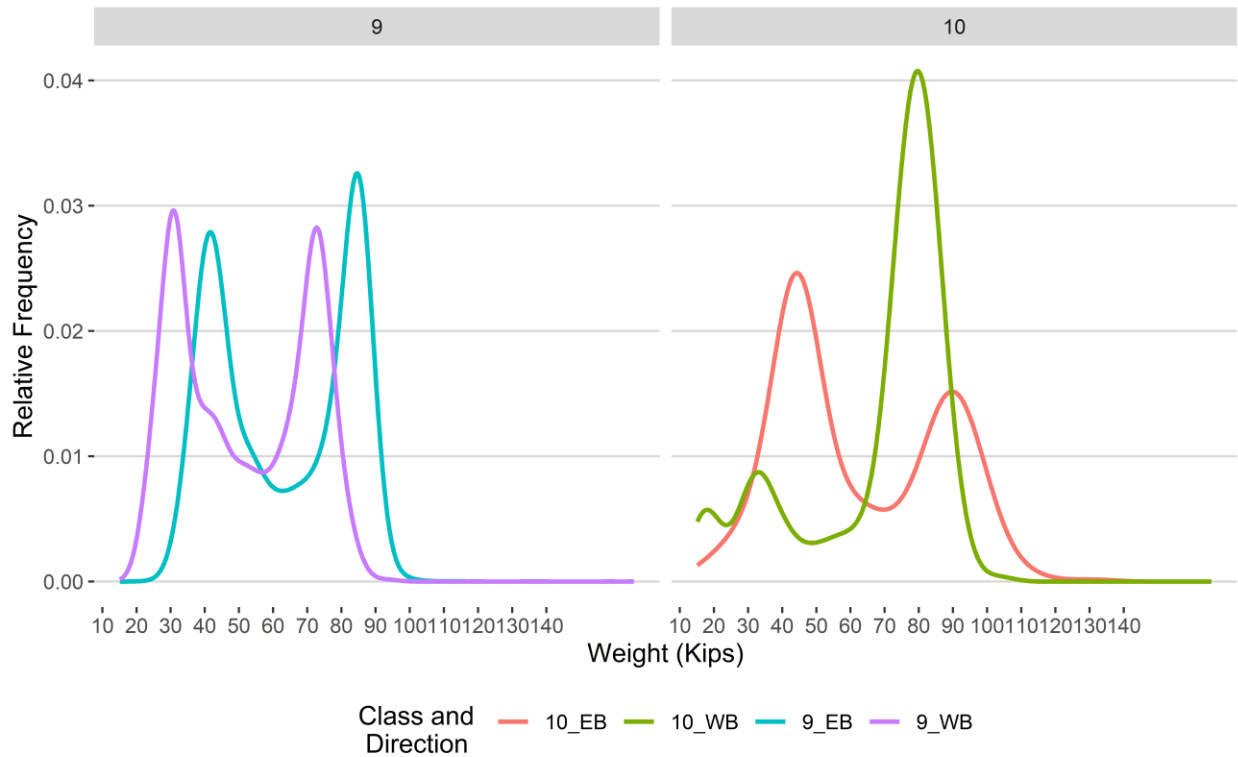


Figure 9 - Freight Percentage  
by Direction and Class

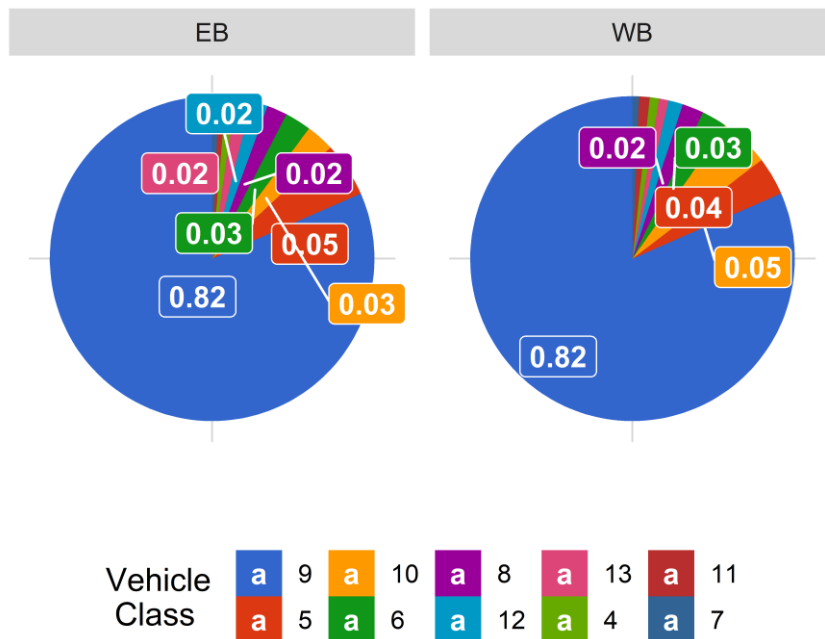




Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

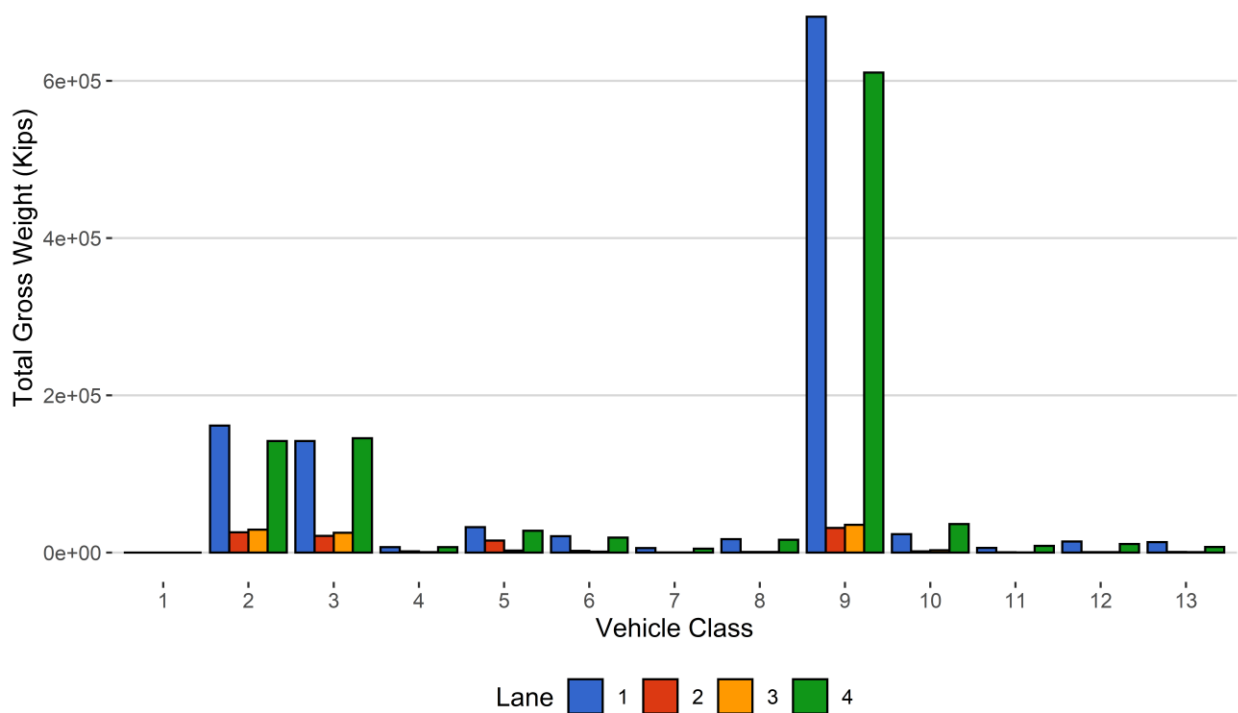


Figure 11 - Total Gross Vehicle Weight t

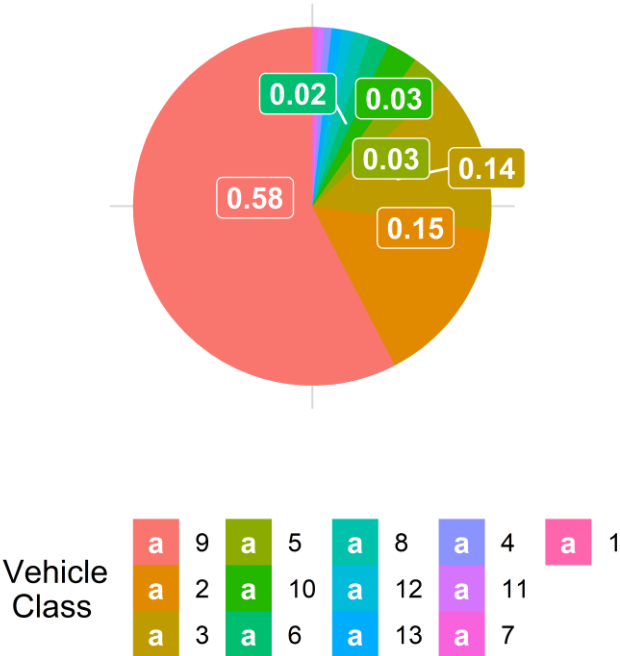


Figure 12 - Total ESALs by Class and Lane

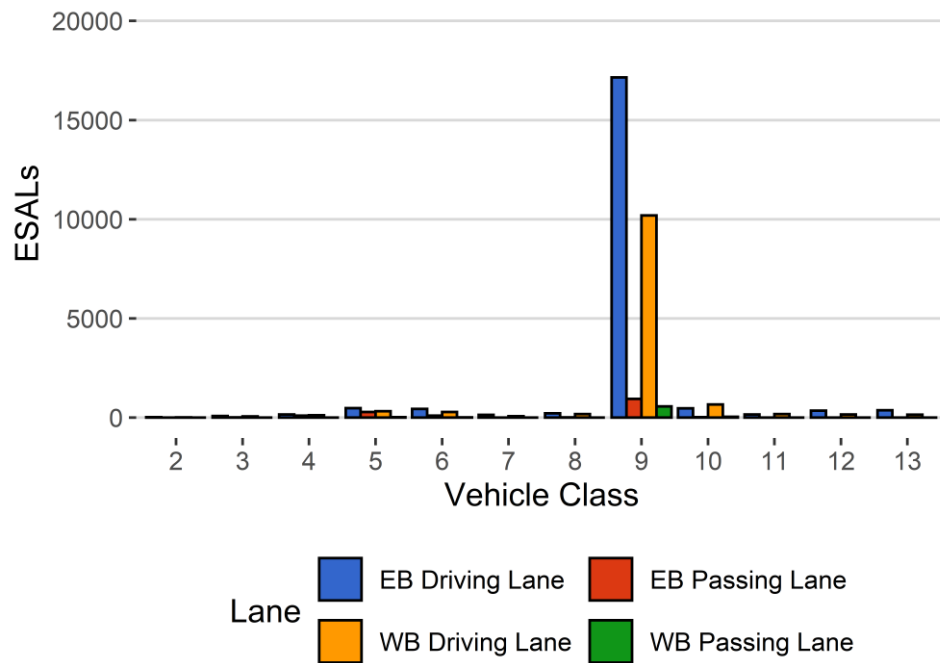
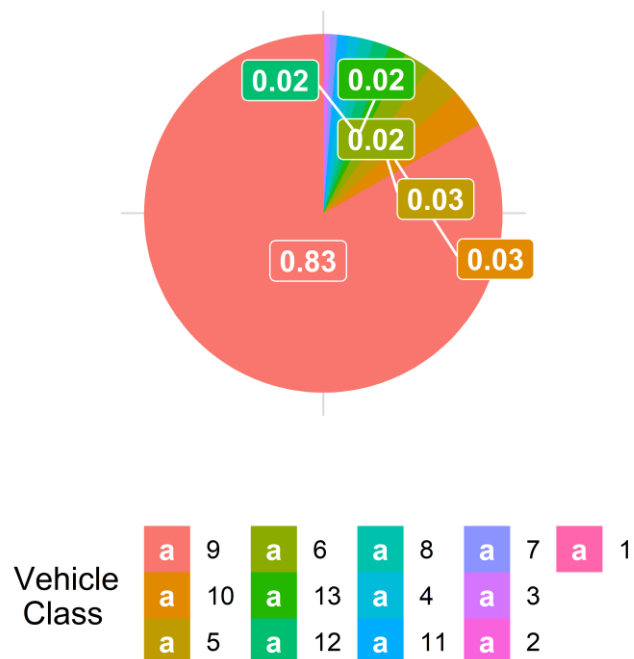


Figure 13 - ESALs by Class



**Table 1 Class 9 Front Axle Weight by Lane**

<i>Month</i>	<i>Lane 1 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 2 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 3 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 4 (kips)</i>	<i>Front Axle +/- 9%</i>
July 2015	11.23	0.00	11.34	0.00	12.02	0.00	11.77	0.00
August 2015	11.58	3.14	11.67	2.91	11.85	-1.42	11.83	0.45
September 2015	11.64	3.73	11.63	2.59	11.77	-2.12	11.74	-0.31
October 2015	11.77	4.84	11.88	4.77	11.26	-6.34	11.63	-1.26
March 2016	10.41	-7.28	12.46	9.93	10.90	-9.29	8.69	-26.23
April 2016	10.29	-8.32	12.41	9.51	10.95	-8.90	8.97	-23.79
May 2016	10.17	-9.43	12.20	7.65	11.00	-8.51	8.92	-24.24
June 2016	10.09	-10.11	12.00	5.83	10.91	-9.26	8.54	-27.43
July 2016	10.14	-9.64	11.98	5.69	10.95	-8.93	8.69	-26.23
August 2016	10.23	-8.84	12.17	7.38	10.81	-10.12	9.00	-23.54
September 2016	10.33	-8.02	12.30	8.54	10.82	-10.01	10.15	-13.83
October 2016	10.45	-6.90	12.56	10.85	10.72	-10.86	10.31	-12.44
November 2016	10.66	-5.04	12.73	12.33	10.86	-9.69	10.02	-14.93
January 2017	11.04	-1.66	13.34	17.68	11.01	-8.41	11.44	-2.87
February 2017	11.05	-1.55	13.17	16.16	10.79	-10.28	10.20	-13.33
March 2017	10.94	-2.52	13.10	15.55	10.63	-11.54	9.82	-16.56
April 2017	10.77	-4.06	12.82	13.08	10.63	-11.60	9.80	-16.77
May 2017	10.69	-4.81	12.65	11.63	10.62	-11.66	11.21	-4.76
June 2017	10.56	-5.91	12.48	10.11	10.73	-10.76	10.44	-11.33
July 2017	10.58	-5.78	12.49	10.22	10.69	-11.05	10.81	-8.17
August 2017	10.69	-4.74	12.70	12.07	10.68	-11.18	11.04	-6.24
September 2017	10.75	-4.28	12.75	12.51	10.64	-11.51	11.19	-4.99
October 2017	10.92	-2.73	13.03	14.92	10.69	-11.08	11.26	-4.39
November 2017	11.26	0.29	13.63	20.20	10.47	-12.89	11.18	-5.06
December 2017	11.43	1.83	13.73	21.08	10.49	-12.71	11.31	-3.91
January	11.48	2.24	13.94	23.01	10.70	-10.96	11.85	0.62

2018								
February 2018	11.46	2.10	13.98	23.31	11.00	-8.49	11.21	-4.81
March 2018	11.32	0.80	13.52	19.27	10.87	-9.56	11.25	-4.44
April 2018	11.23	0.07	12.47	10.01	10.26	-14.62	10.71	-9.08
May 2018	10.97	-2.33	10.73	-5.35	10.16	-15.52	8.99	-23.61
June 2018	10.94	-2.56	10.77	-4.98	10.36	-13.85	9.62	-18.28
July 2018	10.95	-2.42	NA	NA	8.76	-27.15	10.21	-13.26
August 2018	11.12	-0.96	11.70	3.22	NA	NA	10.71	-9.07
October 2018	10.99	-2.14	12.27	8.27	NA	NA	11.04	-6.24
November 2018	11.38	1.41	12.64	11.49	10.47	-12.95	11.15	-5.34
December 2018	11.78	4.92	12.12	6.96	10.49	-12.76	11.21	-4.83
January 2019	11.84	5.50	11.96	5.49	10.71	-10.89	9.24	-21.53
February 2019	11.75	4.62	11.85	4.57	11.17	-7.06	8.89	-24.48
March 2019	11.84	5.42	11.85	4.57	11.49	-4.43	9.54	-18.98
April 2019	11.65	3.74	11.79	4.04	10.39	-13.57	9.73	-17.34
May 2019	11.55	2.90	11.48	1.26	10.24	-14.82	10.72	-8.94
June 2019	11.52	2.65	NA	NA	10.14	-15.68	10.55	-10.36
July 2019	11.56	2.94	NA	NA	10.21	-15.10	10.36	-12.03
August 2019	11.64	3.68	NA	NA	10.36	-13.84	10.74	-8.74
September 2019	11.70	4.19	11.62	2.48	10.51	-12.57	10.84	-7.97
October 2019	11.99	6.84	11.90	4.96	10.46	-12.98	10.94	-7.05

**Table 2 Vehicle Classification Data**

<i>Vehicle Class</i>	<i>Monthly Average Daily Volume</i>	<i>Monthly Total Volume</i>	<i>Monthly Total Volume Percentage</i>	<i>Monthly Total Overweight Vehicles</i>	<i>Monthly Total Overweight Percentage</i>
1	0	3	0	0	0
2	2666	82641	49.7	0	0
3	1594	49399	29.7	0	0
4	17	531	0.3	56	0.9
5	161	4995	3	82	1.3
6	45	1392	0.8	137	2.2
7	6	180	0.1	77	1.2
8	35	1078	0.6	18	0.3
9	783	24276	14.6	5270	83.7
10	32	993	0.6	357	5.7
11	8	257	0.2	18	0.3
12	12	373	0.2	100	1.6
13	8	243	0.1	184	2.9
<b>TOTAL</b>	<b>5367</b>	<b>166363</b>	<b>100</b>	<b>6299</b>	<b>100</b>



**Table 3 Top 10 Gross Vehicle Weight, Class 9 and 10**

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2019-10-26	Saturday	10:30:49	9	EB	2	165.66
2019-10-27	Sunday	12:13:05	9	EB	2	158.31
2019-10-17	Thursday	21:11:42	9	EB	2	139.88
2019-10-27	Sunday	16:01:37	9	EB	2	133.46
2019-10-04	Friday	09:47:44	10	EB	1	131.61
2019-10-27	Sunday	15:34:14	9	EB	2	120.45
2019-10-31	Thursday	13:31:04	10	EB	1	116.83
2019-10-27	Sunday	19:49:01	9	EB	2	116.25
2019-10-29	Tuesday	09:02:14	9	EB	2	112.33
2019-10-17	Thursday	21:11:38	9	EB	2	111.83

**Table 4 Freight Summary**

<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	EB	15	246	19	7.7	8105	247	2350
5	EB	8	2781	55	2	46934	411	12563
6	EB	19	658	10	1.5	22680	169	5184
7	EB	11.5	91	0	0	5703	0	2328
8	EB	31	490	95	19.4	15649	2058	1702
9	EB	33	11255	170	1.5	707464	5288	170830
10	EB	33.5	396	28	7.1	23935	750	5803
11	EB	36.5	105	0	0	6091	0	1129
12	EB	36.5	189	1	0.5	14364	17	3751
13	EB	31.5	156	31	19.9	13556	460	4809
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>16367</b>	<b>409</b>	<b>****</b>	<b>864482</b>	<b>****</b>	<b>210450</b>
<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	WB	15	273	47	17.2	6787	610	1698
5	WB	8	2102	229	10.9	28490	1663	6753
6	WB	19	703	148	21.1	17456	2537	3456
7	WB	11.5	85	0	0	4993	0	2008
8	WB	31	564	298	52.8	9936	7046	845
9	WB	33	12476	3304	26.5	551165	94686	124244
10	WB	33.5	575	76	13.2	37192	1858	10238
11	WB	36.5	146	1	0.7	8411	31	1559
12	WB	36.5	176	0	0	11345	0	2460
13	WB	31.5	82	1	1.2	7488	27	2468
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>17182</b>	<b>4104</b>	<b>****</b>	<b>683262</b>	<b>****</b>	<b>155730</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>33549</b>	<b>4513</b>	<b>203</b>	<b>1547744</b>	<b>117857</b>	<b>366180</b>

**Table 5 Gross Vehicle Weight by Class and Lane**

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	1	2	2	0	5	0
2	161344	25626	29003	141838	357812	15.2
3	141791	21135	25140	145400	333466	14.1
4	6763	1588	595	6801	15748	0.7
5	32179	15166	2545	27608	77498	3.3
6	20835	2014	1090	18903	42841	1.8
7	5635	68	58	4935	10696	0.5
8	16936	771	763	16218	34689	1.5
9	681533	31219	35264	610587	1358603	57.6
10	23255	1430	2810	36240	63736	2.7
11	5859	232	50	8392	14533	0.6
12	13912	469	428	10917	25726	1.1
13	13244	772	454	7060	21530	0.9
<b>TOTAL</b>	<b>1123288</b>	<b>100492</b>	<b>98204</b>	<b>1034899</b>	<b>2356883</b>	<b>100</b>
<b>GVW/LANE</b>	<b>47.66</b>	<b>4.26</b>	<b>4.17</b>	<b>43.91</b>	<b>100</b>	<b>0</b>

**Table 6 ESALs by Class and Lane and Flexible ESAL Factors**

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.25
2	27	5	3	18	54	0.15	0.0014
3	82	11	8	63	164	0.47	0.0069
4	160	97	6	116	378	1.09	1.45
5	481	290	25	328	1124	3.24	0.46
6	437	104	17	289	847	2.45	1.25
7	141	2	0	72	215	0.62	2.39
8	219	11	4	180	415	1.2	0.79
9	17149	942	562	10191	28844	83.25	2.43
10	474	26	46	666	1213	3.5	2.49
11	156	4	0	174	335	0.97	2.6
12	354	7	5	156	521	1.5	2.8
13	374	5	8	152	539	1.56	4.35
<b>TOTAL</b>	<b>20053</b>	<b>1505</b>	<b>686</b>	<b>12405</b>	<b>34649</b>	<b>100</b>	<b>21</b>
<b>ESALS/LANE</b>	<b>57.9</b>	<b>4.3</b>	<b>2</b>	<b>35.8</b>	<b>100</b>	<b>-</b>	<b>-</b>

**Table 7 Site Summary: Volume and Vehicle Class**

<i>Month</i>	<i>Total Volume</i>	<i>Monthly ADT</i>	<i>Monthly HCAD T</i>	<i>Passenger Vehicles</i>	<i>Passenger Vehicles %</i>	<i>Heavy Commercial Vehicles</i>	<i>Heavy Commercial Vehicles %</i>	<i>Heavy Commercial Vehicles in Driving Lane %</i>	<i>Heavy Commercial Vehicles in Passing Lane %</i>
Nov 2018	178317	5944	956	149623	83.9	28694.4	16.1	65.1	34.9
Dec 2018	167266	5396	909	139093	83.2	28172.8	16.8	91.7	8.3
Jan 2019	144335	4656	951	114866	79.6	29469	20.4	93.7	6.3
Feb 2019	129514	4626	925	103624	80	25889.8	20	92.1	7.9
Mar 2019	167692	5409	991	136965	81.7	30726.7	18.3	91.4	8.6
Apr 2019	181026	6034	1016	150536	83.2	30489.7	16.8	89.4	10.6
May 2019	213594	6890	1085	179966	84.3	33628	15.7	67.9	32.1
Jun 2019	228705	7624	1036	197617	86.4	31087.6	13.6	67.8	32.2
Jul 2019	240734	7766	1013	209341	87	31392.7	13	69.4	30.6
Aug 2019	253765	8186	1244	215193	84.8	38572.2	15.2	76.7	23.3
Sep 2019	206755	6853	1294	167936	81.2	38818.6	18.8	93.5	6.5
Oct 2019	166363	6814	1107	132044	79.4	34319.1	20.6	92.5	7.5
<b>TOTAL</b>	<b>2278066</b>	<b>-</b>	<b>-</b>	<b>1896804</b>	<b>-</b>	<b>381261</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>189839</b>	<b>6350</b>	<b>1044</b>	<b>158067</b>	<b>83</b>	<b>31772</b>	<b>17</b>	<b>83</b>	<b>17</b>

###ESALS

<i>Month</i>	<i>ESALS EB Passing Lane</i>	<i>ESALS EB Driving Lane</i>	<i>ESALS WB Driving Lane</i>	<i>ESALS WB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Nov 2018	2583	1168550	295	13398	1184826	1	99	14.7
Dec 2018	15873	578548	780	11257	606458	4	96	4.7
Jan 2019	19913	106314	845	4721	131793	19	81	6.3
Feb 2019	17996	30201	939	2581	51717	40	60	25.5
Mar 2019	24521	14098	1197	4598	44414	66	34	29.8



Apr 2019	22506	9489	954	4149	37098	72	28	10.2
May 2019	23198	77	5065	1377	29717	83	17	5
Jun 2019	44270	0	10778	53	55101	80	20	4.2
Jul 2019	21800	0	6454	162	28416	77	23	4.9
Aug 2019	22546	0	6633	5013	34192	81	19	5.8
Sep 2019	20003	1217	803	13976	35998	94	6	6.8
Oct 2019	20075	5245	686	12445	38451	85	15	18.4
<b>TOTAL</b>	<b>255285</b>	<b>1913739</b>	<b>35428</b>	<b>73728</b>	<b>2278181</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>21274</b>	<b>159478</b>	<b>2952</b>	<b>6144</b>	<b>189848</b>	<b>58</b>	<b>42</b>	<b>11</b>

### ###Gross Vehicle Weight

<i>Month</i>	<i>GVW EB Passing Lane</i>	<i>GVW EB Driving Lane</i>	<i>GVW WB Passing Lane</i>	<i>GVW WB Driving Lane</i>	<i>Total GVW Kips</i>
Nov 18	213558	895490	45406	1067537	2221991
Dec 18	936084	155229	108977	929969	2130259
Jan 19	1044413	70226	87357	662346	1864342
Feb 19	928605	63483	81834	471789	1545712
Mar 19	1216422	96811	120190	656042	2089466
Apr 19	1244314	120017	125942	627946	2118218
May 19	1475893	3230	746759	115061	2340943
Jun 19	2969408	16	1530595	6134	4506154
Jul 19	1515563	35	795934	18538	2330070
Aug 19	1591834	48	686107	529080	2807070
Sep 19	1285187	103428	118216	1234680	2741511
Oct 19	1123981	104255	98223	1035988	2362447
<b>TOTAL</b>	<b>15545263</b>	<b>1612268</b>	<b>4545540</b>	<b>7355111</b>	<b>29058182</b>
<b>AVERAGE</b>	<b>1295439</b>	<b>134356</b>	<b>378795</b>	<b>612926</b>	<b>2421515</b>

### ###Overweight Vehicles

<i>Month</i>	<i>Total Number of Overweight Vehicles</i>	<i>Overweight / Total Volume</i>	<i>Overweight / Heavy Commercial Volume</i>	<i>Number Over 88,000 lbs</i>	<i>Number Over 98,000 lbs</i>
Nov 2018	7311	4.6	23.9	2103	1234
Dec 2018	6426	4.1	22.5	1191	706
Jan 2019	5368	4.1	19.6	1056	357
Feb 2019	4531	4.1	20	1266	297
Mar 2019	6744	4.4	23.7	1982	448
Apr 2019	6228	3.7	22	982	341
May 2019	5775	2.9	18.6	576	205
Jun 2019	11140	2.7	19.8	988	368
Jul 2019	5399	2.5	18.8	546	195

Aug 2019	6051	2.5	16.4	582	180
Sep 2019	6074	3	15.8	569	160
Oct 2019	6353	3.9	18.9	1180	234
<b>TOTAL</b>	<b>77400</b>	<b>-</b>	<b>-</b>	<b>13021</b>	<b>4725</b>
<b>AVERAGE</b>	<b>6450</b>	<b>3.5</b>	<b>20</b>	<b>1085.1</b>	<b>393.8</b>

### ###Freight

<i>Month</i>	<i>EB Freight Tons</i>	<i>WB Freight Tons</i>	<i>Total Freight</i>	<i>EB Freight %</i>	<i>WB Freight %</i>
Nov 2018	148576	155750	304326	48.8	51.2
Dec 2018	160150	138035	298185	53.7	46.3
Jan 2019	197061	80711	277772	70.9	29.1
Feb 2019	176154	53112	229266	76.8	23.2
Mar 2019	238787	79915	318703	74.9	25.1
Apr 2019	238316	71312	309628	77	23
May 2019	241828	82288	324116	74.6	25.4
Jun 2019	471667	114813	586480	80.4	19.6
Jul 2019	230355	56870	287225	80.2	19.8
Aug 2019	243224	124422	367646	66.2	33.8
Sep 2019	215713	177272	392986	54.9	45.1
Oct 2019	210450	155730	366180	57.5	42.5
<b>TOTAL</b>	<b>2772282</b>	<b>1290231</b>	<b>4062513</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>231023.5</b>	<b>107519.2</b>	<b>338542.7</b>	<b>68</b>	<b>32</b>